Redesain topologi jaringan komputer TVRI Jawa Tengah menggunakan metode NDLC (Network Development Life Cycle) melalui analisa top down

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ABSTRAK

Penggunaan jaringan komputer pada suatu instansi saat ini menjadi kebutuhan vital. TVRI Jawa Tengah memanfaatkan resource jaringan komputer untuk keperluan operasional kerja seperti kegiatan live streaming, network file transferring, data transactional keuangan, dan lain lain. Dengan bertambahnya user pada jaringan kerja TVRI Jawa Tengah, hal tersebut membuat padatnya traffic jaringan yang berimbas terhadap penurunan performa jaringan komputer dalam hal ini adalah angka loss packet mencapai kisaran 5-6 % pada setiap application servis operasional kerja yang berimbas terhadap penurunan pencapaian misi kerja TVRI jawa tengah.Melalui pendekatan top down, critical success factor yang ada pada tiap unit kerja pada TVRI Jateng akan di uraikan. Hasil dari pendekatan top down tersebut adalah requirement ideal infrastruktur yang selanjutnya akan di gambarkan menggunakan metode NDLC (Network Development Life Cycle). Untuk mengatasi permasalahan pada jaringan TVRI Jateng, struktur topologi di ubah ke model hirarki jaringan dengan 3 lapisan yaitu core, distribution dan access. Untuk mengatasi kepadatan traffic, di tambahkan struktur VLAN pada desain jaringan baru serta link aggregation untuk meningkatkan troughtput antar konektifitas link

Kata Kunci : Redesain, Top Down, NDLC, Loss Packet, Hirarki jaringan,VLAN,Link Aggregasi.

Redesign Of Computer Network Topology in TVRI Jawa Tengah Using NDLC (Network Development Life Cycle) Method With Top Down Analysis

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ABSTRACT

The use of computer networks in an agency is now a vital necessity. TVRI Central Java utilizes computer network resources for operational purposes such as live streaming activities, network file transfer, financial transactional data, and more. With the increase of users in the network of TVRI Central Java, it makes the density of network traffic that impact on the decline in computer network performance, in this case, is the number of packet loss reaching the range of 5-6% of each application operational work services that impact on the decrease in achievement of work mission TVRI Central Java.Through the top down approach, critical success factors that exist in each work unit on TVRI Central Java will be described. The result of the top down approach is the ideal requirement of infrastructure which will then be described using the NDLC (Network Development Life Cycle) method.To overcome the problems in network TVRI Jateng, topology structure is changed to the hierarchical model of the network with 3 layers of core, distribution, and access.To overcome traffic density, add VLAN structure to new network design and link aggregation to increase throughput between link connectivity.

Keyword : Redesign, Top Down, NDLC, Loss Packet, Network Hierarchy, VLAN, Link Aggregation